

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-50 (canceled)

51. (previously presented) An ejector pin assembly for a mold comprising:

(a) an ejector pin head that is receivable in an ejector plate assembly of the mold;

(b) an ejector pin barrel including an end at which the ejector pin head is disposed;

wherein the ejector pin head and ejector pin barrel are reciprocable relative to the mold;

wherein the ejector pin head has a top surface, a bottom surface, a lengthwise extent greater than the width of the ejector pin barrel, a bore that extends through the top surface and bottom surface of the ejector pin head, a recessed land in one of the top surface and the bottom surface of the ejector pin head that encircles the through bore with the recessed land defined by a bottom wall and a sidewall extending outwardly from the bottom wall and having an arcuate portion and a straight portion;

wherein the ejector pin barrel has a sidewall with a flat in it located adjacent the one end of the ejector pin barrel, with the end of the ejector pin barrel having an end wall that is received in the recessed land with the flat of the ejector pin barrel sidewall bearing against the straight portion of the recessed land sidewall opposing relative rotation between the ejector pin barrel and the ejector pin head, and the ejector pin has its other end disposed toward a cavity of the mold to eject a molded component from the mold;

a fastener that extends through the through bore in the ejector pin head and into the one end of the ejector pin barrel fixing the ejector pin head to the ejector pin barrel such that the ejector pin barrel bears against the ejector pin head; and

wherein the ejector pin head, the ejector pin barrel and the fastener are reciprocable in unison.

52. (canceled)

53. (canceled)

54. (previously presented) The ejector pin assembly of claim 51, further comprising an insert received in a pocket in the barrel of the pin that is disposed at an end that is opposite the end at which the head is mounted.

55. (previously presented) The ejector pin assembly of claim 51, further comprising an indicia-imprinting insert; further comprising a cup mounted to the end of the barrel that is opposite the end at which the head is mounted; and wherein the indicia-imprinting insert is removably received in the cup, manually rotatable relative to the barrel, and otherwise opposing relative rotation.

56. (canceled)

57. (canceled)

58. (canceled)

59. (canceled)

60. (canceled)

61. (canceled)

62. (canceled)

63. (canceled)

64. (canceled)

65. (canceled)

66. (canceled)

67. (canceled)

68. (canceled)

69. (previously presented) An ejector pin assembly for a mold comprising:
- (a) an ejector pin head that is receivable in an ejector plate assembly;
 - (b) an ejector pin barrel having a width less than the lengthwise extent of the ejector pin head, having a length that is capable of being cut to form an end at which the ejector pin head is disposed and thereby decreased in length so as to accommodate a mold into which the ejector pin is to be assembled, and having a length after being cut that is longer than its width;
 - (c) a fastener that mounts the ejector pin head to the ejector pin barrel; and
 - (d) wherein the ejector pin head has a surface with a recessed land formed therein that is defined by a sidewall that includes a locator flat, wherein the ejector pin barrel has a sidewall with a locator flat disposed at the end of the ejector pin barrel at which the ejector pin head is disposed, and wherein the end of the ejector pin barrel at which the ejector pin head is disposed is received in the recessed land in the surface of the ejector pin head with the sidewall of the recessed land encircling the sidewall of the ejector pin barrel and the locator flat of the sidewall of the recessed land mating with the locator flat of the sidewall of the ejector pin barrel preventing relative rotation between the ejector pin barrel and the ejector pin head.

70. (previously presented) An ejector pin assembly for a mold comprising:

(a) an ejector pin head that is receivable in an ejector plate assembly of the mold, the ejector pin head comprising a pair of end walls between which an outer sidewall is disposed with one of the end walls having a recessed land formed therein that includes a locator surface;

(b) an ejector pin barrel of generally cylindrical construction that has a width less than the lengthwise extent of the ejector pin head and a length greater than its width, the ejector pin barrel comprising an outer sidewall having a locator surface disposed adjacent one end of the ejector pin barrel with the barrel locator surface having a shape that is complementary to the shape of the head locator surface, and wherein the one end of the ejector pin barrel is received in the recessed land with the barrel locator surface mating with the head locator surface opposing relative rotation between the ejector pin head and the ejector pin barrel and the other end of the ejector pin barrel being disposed toward a cavity of the mold; and

(c) a fastener that that attaches the ejector pin head to the ejector pin barrel, wherein the fastener comprises a fastener head that engages the ejector pin head and a threaded shank that is threadably received in the ejector pin barrel.

71. (canceled)

72. (canceled)

73. (canceled)

74. (previously presented) An ejector pin assembly for a mold comprising:

(a) an ejector pin head that is receivable in an ejector plate assembly of the mold, the ejector pin head comprising a pair of generally parallel and spaced apart end walls with one of the end walls having a recessed land formed therein that is defined by a bottom wall and a sidewall having a plurality of locator notches formed therein, and the head including a threaded bore disposed in the bottom wall of the recessed land;

(b) a generally cylindrical ejector pin barrel having a width less than a lengthwise extent of the ejector pin head and having a length greater than its width, the ejector pin barrel comprising an outer sidewall extending between a pair of ends of the ejector pin barrel, with the sidewall having a threaded portion disposed adjacent one of the ends of the ejector pin barrel that is threadably received in the threaded bore in the bottom wall of the recessed land of the ejector pin head and the sidewall including an axially extending groove formed therein that extends along at least part of the threaded portion, and wherein the other end of the ejector pin barrel communicates with a cavity of the mold;

(c) a ring that encircles the outer sidewall of the ejector pin barrel and is received in the recessed land of the ejector pin head disposed between the ejector pin barrel and the sidewall of the recessed land of the ejector pin head, the ring comprising a radially inwardly extending projection that is received in the groove in the sidewall of the ejector pin barrel and a plurality of spaced apart and radially outwardly extending projections that are each received in one of the plurality of notches in the sidewall of the recessed land of the ejector pin head opposing relative rotation between the ejector pin barrel and the ejector pin head;

(d) wherein the ejector pin barrel, the ejector pin head and the ring are reciprocable relative to the mold.

75. (previously presented) An ejector pin assembly for a mold comprising:

(a) an ejector pin head that is receivable in an ejector plate assembly of the mold, the ejector pin head comprising a pair of arms curved to define an arcuate channel therebetween that is internally threaded with the end of one of the arms facing and spaced apart from the end of the other one of the arms;

(b) a cylindrical ejector pin barrel having a width less than a lengthwise extent of the ejector pin head and having a length greater than its width, the ejector pin barrel comprising an outer sidewall extending between a pair of ends of the ejector pin barrel with the sidewall having a threaded portion disposed adjacent one of the ends of the ejector pin barrel that is received in the threaded channel formed between the curved arms of the ejector pin head; and

(c) a fastener that engages both arms of the ejector pin head adjacent the end of each arm clamping the arms around the threaded portion of the ejector pin barrel to retain the ejector pin barrel in the ejector pin head.

76. (currently amended) An ejector pin assembly for a mold comprising:

(a) a disc-shaped ejector pin head that is receivable in an ejector plate assembly of the mold, the ejector pin head comprising a pair of generally parallel end walls having a bore extending therethrough with one of the end walls having a recessed land formed therein that is defined by a flat bottom wall and a sidewall that surrounds the bore with the sidewall being curved with a portion that is straight;

(b) a cylindrical ejector pin barrel having a width less than a lengthwise extent of the ejector pin head and having a length greater than its width, the ejector pin barrel comprising a pair of ejector pin barrel ends and a sidewall that extends between the ejector pin barrel ends with one of the ejector pin barrel ends received in the recessed land being flat and having a circular periphery with a portion of the periphery being straight and the other one of the ejector pin barrel ends being disposed toward a cavity of the mold;

(c) wherein the sidewall of the recessed land surrounds the periphery of the ejector pin barrel end received in the recessed land with the ejector pin barrel end abutting against the bottom wall of the recessed land and the straight portion of the ejector pin barrel end bearing against the straight portion of the sidewall of the recessed land opposing relative rotation between the ejector pin head and the ejector pin barrel; and

(d) a fastener comprising a threaded shank that extends outwardly from an enlarged head wherein the threaded shank is oriented in an axial direction parallel to a longitudinal axis of the ejector pin barrel, extends through the bore in the ejector pin head, and engages the ejector pin barrel end attaching the ejector pin head to the ejector pin barrel with the fastener head disposed substantially flush with the other one of the end walls of the ejector pin head.

77. (previously presented) The ejector pin assembly of claim 51, wherein the ejector pin head has a non-circular outer sidewall extending about its periphery engageable with a complementary ejector head receiver of the mold ejector plate assembly with each configured to oppose relative rotation between the ejector pin head and ejector plate assembly.

78. (previously presented) The ejector pin assembly of claim 77, wherein the flat extends longitudinally along a section of the axial length of the ejector pin barrel defining a D-shaped end that is received in the recessed land in the ejector pin head and wherein the recessed land is also D-shaped.

79. (currently amended) An ejector pin assembly for a mold comprising an ejector pin head mountable in an ejector plate assembly of the mold and constructed and arranged to oppose relative rotation between the ejector pin head and the ejector plate assembly; an elongate generally cylindrical ejector pin barrel that mounts at one end to the ejector pin head and constructed and arranged to oppose relative rotation between the ejector pin head and the ejector pin barrel; ~~and an insert disposed at the other end of the ejector pin barrel;~~ and wherein the ejector pin has an outer sidewall with a locator comprising a flat portion formed therein that is engageable with the ejector plate assembly to prevent relative rotation therebetween.

80. (previously presented) The ejector pin assembly of claim 79, wherein the insert comprises an indicia imprinting marker unit imprinting an indicia in molding material in the mold when contacting the molding material.

81. (previously presented) The ejector pin assembly of claim 80, wherein the indicia-imprinting marker unit further comprises a removable insert that is manually rotatable relative to the ejector pin barrel and otherwise opposing relative rotation therebetween.

82. (canceled)

83. (currently amended) The ejector pin assembly of claim ~~82~~79, wherein the ejector pin barrel has a generally D-shaped end and the ejector pin head has a generally D-shaped seat in which the generally D-shaped end is received with engagement therebetween preventing relative rotation between the ejector pin barrel and ejector pin head.

84. (previously presented) The ejector pin assembly of claim 83, further comprising an attachment that attaches the ejector pin head to the ejector pin barrel with the ejector pin barrel seated in the D-shaped seat in the ejector pin head.

85. (previously presented) The ejector pin assembly of claim 79, further comprising a coupling ring having an interrupted circular outer periphery and an interrupted circular inner periphery wherein there is engagement between one of the inner and outer periphery and the ejector pin head and there is engagement between the other one of the inner and outer periphery and the ejector pin barrel preventing relative rotation between the ejector pin head and the ejector pin barrel.

86. (previously presented) The ejector pin assembly of claim 79, wherein the ejector pin barrel is of threaded exterior sidewall construction adjacent its end that is mounted to the ejector pin head wherein the ejector pin head is of threaded interior sidewall construction and comprises a C-shaped clamp that clamps around the ejector pin barrel with at least part of the threaded exterior sidewall of the ejector pin barrel disposed in engagement with at least part of the threaded interior sidewall of the ejector pin head.

87. (previously presented) An ejector pin assembly for a mold comprising:

(a) an ejector pin head mountable in an ejector plate assembly, the ejector pin head having (i) a non-circular outer peripheral sidewall engaging the ejector plate assembly when the ejector pin head is mounted in the ejector plate assembly opposing relative rotation therebetween, and (ii) a non-circular seat formed therein; and

(b) an elongate generally cylindrical ejector pin barrel having one end that is non-circular received in the non-circular seat in the ejector pin head defining a joint comprising engagement therebetween opposing relative rotation between the ejector pin head and the ejector pin barrel, and having another end configured to carry out a function in addition to ejecting a molded component from the mold.

88. (previously presented) An ejector pin assembly for a mold comprising:

(a) an ejector pin head mountable in an ejector plate assembly, the ejector pin head having (i) a circular outer peripheral sidewall interrupted by a flat surface engageable with the ejector plate assembly when the ejector pin head is mounted thereto preventing relative rotation therebetween, and (ii) a D-shaped seat disposed therein disposed generally transversely relative to the flat surface thereof;

(b) an elongate generally cylindrical ejector pin barrel with one end that is D-shaped received in the D-shaped seat of the ejector pin head with engagement therebetween preventing relative rotation between the ejector pin head and ejector pin barrel, and with its other end configured to carry out a function in addition to ejecting a molded component from the mold; and

(c) an attachment keeping the D-shaped barrel end in the D-shaped seat of the ejector pin head.

89. (previously presented) An ejector pin assembly for a mold comprising:

(a) an ejector pin head mountable in an ejector plate assembly, the ejector pin head having (i) a circular outer peripheral sidewall interrupted by a flat surface engageable with the ejector plate assembly when the ejector pin head is mounted thereto preventing relative rotation therebetween, and (ii) a D-shaped seat disposed therein that has a seating surface disposed generally perpendicular relative to the flat surface of the ejector pin and a non-circular sidewall defining at least a portion of the D-shaped seat; and

(b) an elongate ejector pin barrel (i) having one end that has a D-shape substantially complementary to that of the D-shaped seat in the ejector pin head opposing relative rotation between ejector pin head and the ejector pin barrel when the D-shaped pin barrel end is seated in the D-shaped seat in the ejector pin head, and (ii) comprising an effector at or adjacent its other end capable of doing something in addition to facilitating ejection of a molded part from the mold.

90. (previously presented) An ejector pin assembly for a mold comprising:

(a) an ejector pin head mountable in an ejector plate assembly, the ejector pin head having (i) a circular outer peripheral sidewall having a flat engageable with the ejector plate assembly when the ejector pin head is mounted thereto preventing relative rotation therebetween, and (ii) a D-shaped seat disposed therein that has a seating surface disposed generally perpendicular relative to the flat surface of the ejector pin and a non-circular sidewall defining at least a portion of the D-shaped seat;

(b) an elongate ejector pin barrel having one end that has a D-shape substantially complementary to that of the D-shaped seat in the ejector pin head opposing relative rotation between ejector pin head and the ejector pin barrel when the D-shaped pin barrel end is seated in the D-shaped seat in the ejector pin head, and (ii) comprising an insert disposed at or adjacent its other end carrying out a task in addition to ejecting a molded part from the mold; and

(c) a fastener attaching the ejector pin head to the ejector pin barrel.

91. (currently amended) An ejector pin assembly for a mold comprising:

(a) an ejector pin head mountable in an ejector plate assembly comprised of (i) an outer locator providing interference between the ejector pin head and ejector plate assembly opposing relative rotary movement therebetween and (ii) a ~~splined~~-socket that comprises a flat portion;

(b) an elongate ejector pin barrel comprising a complementary complementarily formed ~~splined~~-shaft at one end so as to be received in the ~~splined~~-socket ~~comprising~~ forming a fixed non-rotary joint preventing relative rotary movement between the ejector pin barrel and the ejector pin head;

(c) a threaded fastener engaging at least the ejector pin barrel providing attachment between the ejector pin barrel and the ejector pin head; and

(d) a marking insert disposed at the other end of the ejector pin barrel.

92. (previously presented) The ejector pin assembly of claim 91, wherein the marking insert comprises an indicia-imprinting insert configured for manual indexing relative to the ejector pin barrel between a plurality of positions and configured to otherwise opposes relative rotation therebetween.